SAFETY ALERT

Stockpile dozer lodged in reclaim valve

INCIDENT

A dozer tipped into a reclaim valve when the operator misjudged the valve location. The operator was unable to sight the valve location due to the steepness and height of coal left near the valve.

The operator loaded a full blade of coal at the bottom of the ramp and pushed to the top maintaining a "curl" of coal on the blade. After reaching the push point he was still unaware of the valve location and the dozer slumped left and forward into the valve.

CIRCUMSTANCES

The incident occurred at approx 6:40pm, in wet weather. The operator had commenced working on the stockpile at shift change-over and this was his first push of the shift.

Visibility was impacted by environmental conditions but the operator was confident he could complete the task. A train was partly loaded at the time of the incident.

INVESTIGATION

A full investigation is yet to be completed but preliminary findings show:

- There were insufficient visual cues for the operator to determine the location of the valve at the time of the incident. This was compounded by the condition of the stockpile at shift changeover.

- The operator had not been given sufficient time to familiarise himself with the condition of the stockpile and the stockpile procedures.

- The valve was left open during the shift change, contrary to stockpile operating procedures.

- The dozer was meant to have a tilt switch fitted to allow for engine shut-off independent of the operator, however, a tilt switch wasn't installed at the time of the incident.

RECOMMENDATIONS

- Dozer operators should have a positive visual of the void before working near the valve. Training and competence of dozer operators should include a familiarisation period for coal stockpile operations.

- Review dozer operating procedures on stockpiles, with particular focus on specific controls for dozer positioning in relation to valves/feeders. Draft MDG28 *Safety requirements – Reclaim tunnels and coal stockpiles* would assist in this review.

- Review the protocols for starting and stopping valves on live stockpiles.

- Review and implement additional devices to determine the location of valves or other high risk areas on stockpiles in relation to dozer position.

- Ensure the parameters of any GPS system are understood and designed to give useful and accurate information to the operator. The system should be set to alarm if the dozer is in a dangerous position to tell the operator to stop the machine and reverse away.

- Install tilt switches on all stockpile dozers to shut down the engine independent of the dozer operator. Develop systems and procedures to ensure tilt switches are installed and maintained.

- Review the potential for dozer engulfment. If the stockpile poses an engulfment risk to the dozer operator then the cab of the dozer should be sufficiently strengthened to resist burial pressures.

This type of incident has occurred on three separate occasions in recent times in NSW coalfields. All operations should consider the hierarchy of controls for elimination of the hazard. The use of automation or remote control should be conscientiously and actively investigated. The potential for other engineering solutions to remove human interaction as far as possible should also be investigated.

NOTE: Please ensure all relevant people in your organisation receive a copy of this Safety Alert, and are informed of its content and recommendations. This Safety Alert should be processed in a systematic manner through the mine's information and communication process. It should also be placed on the mine's notice board.

Signed

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MINE SAFETY OPERATIONS BRANCH
TRADE & INVESTMENT**

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